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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/896,858      | 06/29/2001  | Boris Gelfand        | 2127                | 9028             |

7590 07/23/2003  
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EXAMINER

NGUYEN, CINDY

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2171

DATE MAILED: 07/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

P24

**Office Action Summary**

Application No.

09/896,858

Applicant(s)

GELFAND, BORIS

Examiner

Cindy Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 June 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4                      6) ☐ Other:

## DETAILED ACTION

This is in response to application filed on 06/29/01 in which claims 1-20 are presented for examination.

### 1. *Information Disclosure Statement*

The information disclosure statement filed on 03/25/02 is in compliance with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. Because it has been placed in the application file, and the information referred to therein has been considered as to the merits.

### 2. *Abstract*

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it contains more than 150 words, and also it contains more than one paragraph. Correction is required.

### 3. *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**4. Claims 1-9, 12 and 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawai (U.S 5717924).**

Regarding claim 1, Kawai discloses: A collection of data relating to multiple instances of multiple entity types, the data collection comprising:

a) a plurality of data cells containing all of the data in the collection (fig. 12a and corresponding text, Kawai), with each cell containing

i) a single instance identifier value identifying one specific instance of a specific entity type (as surrogate key in fig. 12a, Kawai);

ii) a single attribute type identifier value identifying one specific attribute type for the specific entity type (as foreign key student in fig. 12a, Kawai); and

iii) an attribute value for the identified one specific attribute type (as GPA in fig. 12a, Kawai).

Regarding claim 2, all the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Kawai discloses: wherein each data cell further contains: iv) a single entity identifier value identifying the specific entity type (as major fig. 12a, Kawai).

Regarding claim 3, all the limitations of this claim have been noted in the rejection of claim 2 above. In addition, Kawai discloses: wherein all cells having the same instance identifier value and the same entity identifier value together define a cell set containing all of the data in the collection relating to the one specific instance of the one specific entity type (100, fig. 2 and corresponding text, Kawai).

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Regarding claim 4, all the limitations of this claim have been noted in the rejection of claim 2 above. In addition, Kawai discloses: wherein at least one cell has an attribute value that contains multiple, separate values relating to the specific attribute type of the specific instance of the specific entity type (as name, address, soc-sec-no, birthday in 105, 107, fig. 2 and corresponding text, Kawai).

Regarding claim 5, all the limitations of this claim have been noted in the rejection of claim 2 above. In addition, Kawai discloses: wherein each cell has only four fields relating to actual data, the four fields containing the instance identifier value, the entity identifier value, the attribute type identifier, and the attribute value (105, 107, fig. 2 and corresponding text, Kawai).

Regarding claim 6, all the limitations of this claim have been noted in the rejection of claim 5 above. In addition, Kawai discloses: wherein no two cells contain the same values in all of the four fields (105, 107, fig. 2 and corresponding text, Kawai).

Regarding claim 7, all the limitations of this claim have been noted in the rejection of claim 5 above. In addition, Kawai discloses: wherein each cell further contains meta data associated with the cell (as name, address soc-sec-no in fig. 2, Kawai).

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Regarding claim 8, all the limitations of this claim have been noted in the rejection of claim 7 above. In addition, Kawai discloses: wherein the meta data includes data type information (as name, address soc-sec-no in fig. 2, Kawai).

Regarding claim 9, Kawai disclose: A method of establishing an association between a first data cell (employee in 150, fig. 6 and corresponding text, Kawai) and a second data cell (as manager in 152, fig. 6 and corresponding text, Kawai), with each data cell containing entity instance identifying information (as prod-group) and a single attribute value for the entity instance (as salary), the method comprising:

- a) creating a third data cell formatted in the same way as the first and second data cells (as soc-sec-no in 150, fig. 6, Kawai),

- b) using the entity instance identifying information found in the first data cell as the entity instance identifying information of the third data cell (162, fig. 6 and corresponding text, Kawai), and

- c) using the entity instance identifying information of the second data cell as the attribute value for the third data cell (as using prod-group in 152 as prod-group in 160, fig. 6, Kawai).

Regarding claim 12, all the limitations of this claim have been noted in the rejection of claim 9 above. In addition, Kawai discloses: further comprising the steps of: d) creating a fourth data cell formatted in the same way as the first, second, and third data cell (130, fig. 4 and corresponding text, Kawai);

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e) using the entity instance identifying information found in the second data cell as the entity instance identifying information of the fourth data cell (col. 6, lines 6-19, Kawai), and

f) using the entity instance identifying information of the first data cell as the attribute value for the fourth data cell (col. 6, lines 20-27, Kawai).

Regarding claim 15, Kawai disclose: A collection of data cells, wherein each cell contains a single element of data relating to a specific instance of an entity, the collection comprising:

a) a first data cell containing four fields each having a value (122, fig. 4 and corresponding text, Kawai);

b) a second data cell containing four fields each having a value (120, fig. 4 and corresponding text, Kawai);

c) a linking cell defining an association between the first cell and the second cell (118, fig. 4 and corresponding text, Kawai), the linking cell having four fields each having values, the value of two of the fields of the linking cell being the same as two of the values of the first cell fields; the value of the remaining two fields of the linking cell being the same as two of the values of the second cell fields (as name, address, salary, wpm in fig. 4 and corresponding text, Kawai).

Regarding claim 16, all the limitations of this claim have been noted in the rejection of claim 15 above. In addition, Kawai discloses: wherein the linking cell has the same format as the first and second cells (col. 6, lines 37-46, Kawai).

Regarding claim 17, all the limitations of this claim have been noted in the rejection of claim 16 above. In addition, Kawai discloses: wherein the linking cell utilizes a flag to indicate that the linking cell contains linking information (col. 6, lines 37-46, Kawai).

Regarding claim 18, all the limitations of this claim have been noted in the rejection of claim 16 above. In addition, Kawai discloses: wherein the first, second, and linking cells each contain the following four fields: an entity instance field (as name); an entity type field (address); an attribute type field (salary); and an attribute value field (wpm) (in fig. 4 and corresponding text, Kawai).

Regarding claim 19, all the limitations of this claim have been noted in the rejection of claim 18 above. In addition, Kawai discloses: wherein the linking cell contains the entity instance field value and the entity type field value of the first cell as the values of its own entity instance field and its entity type field, respectively (col. 6, lines 51-62, Kawai); and further wherein the linking cell contains the entity instance field value and the entity type field value of the second cell as the values of its own attribute value field and its attribute type field, respectively (col. 7, lines 18-30, Kawai).

Regarding claim 20, all the limitations of this claim have been noted in the rejection of claim 19 above. In addition, Kawai discloses: further comprising a second linking cell also having an entity instance field, an entity type field, an attribute type field, and an attribute value field, wherein the second linking cell contains the entity instance field value and the entity type field value of the second cell as the values of its own entity instance field and its entity type field,



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respectively (col. 8, lines 47-60, Kawai); and further wherein the second linking cell contains the entity instance field value and the entity type field value of the first cell as the values of its own attribute value field and its attribute type field, respectively (col. 8, lines 61 to col. 9, lines 14, Kawai).

### **5. *Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**6. Claims 10, 11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai (U.S 5717924) in view of Williamson et al. (U.S 6122641) (Williamson).**

Regarding claim 10, all the limitations of this claim have been noted in the rejection of claim 9 above. However, Kawai didn't disclose: wherein the first, second, and third data cells further contain entity type information, and further comprising the step of: d) using the entity type information of the first data cell as the entity type information of the third data cell. On the

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other hand, Williamson disclose: wherein the first, second, and third data cells further contain entity type information, and further comprising the step of: d) using the entity type information of the first data cell as the entity type information of the third data cell (478, fig. 4 and corresponding text, Williamson). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include using the entity type information of the first data cell as the entity type information of the third data cell in the system of Kawai as taught by Williamson. The motivation being to enable the user stores information about relationships in the cells using linking information that associate one cell with other with allows fast access to data in a table.

Regarding claim 11, all the limitations of this claim have been noted in the rejection of claim 10 above. In addition, Kawai/Williamson disclose: wherein the first, second, and third data cells further contain attribute type information, and further comprising the step of: e) using the entity type information of the second data cell as the attribute type information of the third data cell (474, fig. 4 and corresponding text, Williamson).

Regarding claim 13, all the limitations of this claim have been noted in the rejection of claim 12 above. In addition, Kawai/Williamson disclose: wherein the first, second, third, and fourth data cells further contain entity type information, and further comprising the step of: g) using the entity type information of the first data cell as the entity type information of the third data cell (478, fig. 4 and corresponding text, Williamson); and h) using the entity type information of the second data cell as the entity type information of the fourth data cell (col. 6,

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lines 6-19, Williamson). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include using the entity type information of the first data cell as the entity type information of the third data cell and using the entity type information of the second data cell as the entity type information of the fourth data cell in the system of Kawai as taught by Williamson. The motivation being to enable the user stores information about relationships in the cells using linking information that associate one cell with other with allows fast access to data in a table.

Regarding claim 14, all the limitations of this claim have been noted in the rejection of claim 13 above. In addition, Kawai/Williamson disclose: wherein the first, second, third, and fourth data cells further contain attribute type information, and further comprising the step of: i) using the entity type information of the second data cell as the attribute type information of the third data cell (478, fig. 4 and corresponding text, Williamson); and j) using the entity type information of the first data cell as the attribute type information of the fourth data cell (470, fig. 4 and corresponding text, Williamson).

## **7. Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lowry et al. (U.S 4864497). Method of integrating software application programs using an attributive data model database.

Handel et al. (U.S 6195651). System, method and article of manufacture for a tuned user application experience.

Gupta et al. (U.S 6154748). Method for visually mapping data between different record formats.

Carey et al. (U.S 6421658). Efficient implementation of typed view hierarchies for ORDBMS.

Gupta et al. (U.S 6438562). Parallel index maintenance.


Heubner et al. (U.S 6101502). Object model mapping and runtime engine for employing relational database with object oriented software.

#### **8. Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

  
Cindy Nguyen  
July 16, 2003

  
**FRANTZ COBY**  
**PRIMARY EXAMINER**